Claims

1. A blood pressure measuring method, wherein a pulse oscillogram (PO) of a patient is determined and from this the blood pressure is detected and displayed,

characterized in that,

in the course of determining the individual pulse oscillogram (PO), an analysis regarding hemodynamic stability is furthermore performed, wherein at least one hemodynamic parameter and/or at least one other physiological parameter which correlates with the hemodynamic parameter are evaluated in respect to chronological changes, and

assessment criteria for the presence of hemodynamic stability are obtained from the analysis, by means of which the determination of the blood pressure value or the determined blood pressure value are brought into correlation in such a way that it is ascertained whether the blood pressure value was obtained during hemodynamic stability, or that a corrected blood value is determined.

2. The method in accordance with claim 1,

characterized in that

a warning indication is generated by means of the evaluation criteria if they deviate from preset or predeterminable threshold criteria.

3. The method in accordance with claim 1 or 2,

characterized in that

the individual pulse oscillogram (PO) is subjected to an analysis regarding hemodynamic stability.

4. The method in accordance with one of the preceding claims,

characterized in that

prior to obtaining the assessment criteria, influential values of artifacts and/or arrhythmia are suppressed.

5. The method in accordance with claim 3 or 4,

characterized in that

a pulse period progression (2.2), and/or a pulse amplitude progression (3), and/or the pulse shape (6), are determined and analyzed from the pulse oscillogram (PO), and

the assessment criteria from the pulse period progression (2.2), the pulse amplitude progression (3), the pulse shape (6), or from a combined evaluation are formed from at least two items of this base information.

6. The method in accordance with claim 5,

characterized in that

pulse period lengths of at least a starting range and an end range of the pulse oscillogram (PO) are compared with each other, and

a deviation of the pulse period lengths of the starting range ($T_{initial}$) and the end range ($T_{terminal}$) is made the basis of the assessment criteria.

7. The method in accordance with claim 6,

characterized in that

the deviation of the lengths of the pulse period is calculated by means of the pulse oscillogram (PO) as the difference of the lengths of the periods of the starting range and the end range as a function of a mean pulse period

length of the pulse oscillogram.

8. The method in accordance with claim 5,
characterized in that
the entire progression of all pulse periods in regard to their chronological change is determined, and this change is used as a measure for the hemodynamic stability.

9. The method in accordance with claim 5,
characterized in that
the entire progression of the pulse-specific systolic times in regard to their changes over time is determined, and this change is used as a measure of the hemodynamic stability.

10. The method in accordance with one of claims 5 to 9,
characterized in that
an assessment of the constancy of the pulse period progression (2.2) is included when forming the assessment criteria.

11. The method in accordance with one of claims 5 to 10,
characterized in that
a rise (α) in the ascending branch of the envelope or a rise (β) in its descending branch, or a plateau width (PL) around their maximum, or a combination of at least two of these characteristic values from the pulse amplitude progression (3) is/are used as characteristic value(s) for forming the assessment criteria.

12. The method in accordance with claim 5 to 11, characterized in that

as assessment criteria for the hemodynamic stability the analysis of the pulse shape (6) includes a determination of one or several rises at least at one point of an ascending and/or a descending pulse flank, and

a chronological change in the rise(s) at the respective points or a ratio of the rises at least at two points of a pulse is checked for different pulses.

13. The method in accordance with claim 5 to 12, characterized in that

for forming the assessment criteria, the pulse period progression (2.2), the pulse amplitude progression (PA) and/or the pulse shape (6) are weighted identically or differently, depending on their markedness.

14. The method in accordance with one of the preceding claims,

characterized in that,

as another parameter a breathing frequency signal, an electrocardiogram signal and/or a skin impedance measurement signal are determined and evaluated in regard to their chronological change during the individual blood pressure measurement.

15. The method in accordance with claim 14, characterized in that

the breathing frequency signal is obtained from the analysis of the pulse oscillogram, or by means of an additional sensor arrangement.

16. The method in accordance with one of the preceding claims,

characterized in that

the diagnosis of a hemodynamic instability is employed for an automated correction of the error effects.

17. A sphygmomanometer for executing the method in accordance with claim 1, having an inflatable cuff and an evaluating device which can be arranged thereon or connected to it, with a unit (1) creating a pulse oscillogram (PO), a blood pressure determination device and a display device,

characterized in that

the evaluating unit furthermore has an assessment arrangement which is embodied in such a way that assessment criteria for the presence of hemodynamic stability are formed with it during the determination of the individual pulse oscillogram (PO), and

the display device is provided with an indicator of hemodynamic instability.

18. The sphygmomanometer in accordance with claim 17,

characterized in that

the assessment arrangement is designed for detecting a pulse period progression (2.2), and/or a pulse amplitude progression (3), and/or pulse forms (6) from the pulse oscillogram (PO), and the formation of the assessment criteria from the pulse period progression (2.2), and/or a pulse amplitude progression (3), and/or a pulse form change.

19. The sphygmomanometer in accordance with claim 17 or 18,

characterized in that

the assessment arrangement is designed for detecting at least one physiological (secondary) parameter correlating with a change of the hemodynamics which relates to a breathing frequency signal, an electrocardiogram signal and/or a skin impedance signal.